

AD-A054 090

ARMY ENGINEER WATERWAYS EXPERIMENT STATION VICKSBURG MISS F/G 13/2  
WATERWAY POINT DIRECTORY FOR THE GREAT LAKES, ATLANTIC, AND PAC--ETC(U)  
JAN 76 L L DAGGETT, R W MCCARLEY

**UNCLASSIFIED**

WES-MP-H-76-2

NL

1 OF 1  
AD  
A054090

END  
DATE  
FILMED  
6 -78  
DDC

TA7  
W34 m  
No. H-76-2  
Cop. 3



0

MISCELLANEOUS PAPER H-76-2

# WATERWAY POINT DIRECTORY FOR THE GREAT LAKES, ATLANTIC, AND PACIFIC AREAS

by

Larry L. Daggett and Robert W. McCarley

Hydraulics Laboratory  
U. S. Army Engineer Waterways Experiment Station  
P. O. Box 631, Vicksburg, Miss. 39180

January 1976

Final Report

Approved For Public Release; Distribution Unlimited

AD-A054090



Prepared for Office, Chief of Engineers, U. S. Army  
Washington, D. C. 20314

LIBRARY BRANCH  
TECHNICAL INFORMATION CENTER  
US ARMY ENGINEER WATERWAYS EXPERIMENT STATION  
VICKSBURG, MISSISSIPPI



Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
Miscellaneous Paper H-76-2		
4. TITLE (and Subtitle)		5. TYPE OF REPORT & PERIOD COVERED
Waterway Point Directory for the Great Lakes, Atlantic, and Pacific Areas		Final Report
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s)		8. CONTRACT OR GRANT NUMBER(s)
Larry L. Daggett Robert W. McCarley		
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
U. S. Army Engineer Waterways Experiment Station Hydraulics Laboratory P.O. Box 631, Vicksburg, MS 39180		
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE
Office, Chief of Engineers, U. S. Army (CWP-S) Washington, DC 20314		January 1976
		13. NUMBER OF PAGES
		506
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report)
		Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)		
Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
Great Lakes                      Waterborne commerce                      Business Economic Areas Atlantic Coast                      Waterways (transportation)                      Standard Metropolitan Pacific Coast                      Port codes                      Statistical Areas Navigation directories                      Dock codes                      Water Resource Areas Waterway Point Directory		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		
The Waterway Point Directory is a quick-reference working document for use by engineers and planners in the general fields of river navigation and waterborne commodity movements. All navigable rivers, bays, streams, creeks & other such waterways in the Great Lakes, Atlantic, & Pacific areas are included in this initial printing of the Directory. The waterways included in the Directory are listed by responsible Corps district in three separate appendices:  (Continued)		

- a. Appendix E - Great Lakes Area
- b. Appendix F - Atlantic Area
- c. Appendix G - Pacific Area

The Directory is, in essence, a compilation of significant data relating to each commercial dock, town, landing, navigation lock, bridge, junction, and other such river points contained in selected portions of the U. S. Army Engineer Waterborne Commerce Statistics Center (WCSC) Port and Dock Code Manual (Parts 1, 2, 3, and 4). Eight other different types of reference documents and maps were used to compile the information on each river point. The following information, when pertinent and available, was included in the Directory for each of the river points listed: (a) WCSC port and dock codes, (b) descriptive title of each point, (c) point type code [Appendix C], (d) area code [Appendix D], (e) location in terms of the following: (1) state, (2) county or county equivalent, (3) Business Economic Area [BEA], (4) Strategic Metropolitan Statistical Area [SMSA], and (5) Water Resource Area [WRA]. A special Corps Performance Monitoring System [PMS] lock code was specified for each active lock listed in the Directory.

ACCESSION TO:	
NTIS	White Section <input checked="" type="checkbox"/>
DDC	Self Section <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION:	
BY:	
DISTRIBUTION/AVAILABILITY CODES	
Dist.	AVAIL. and/or SPECIAL
A	



## PREFACE

The Great Lakes, Atlantic, and Pacific areas waterway data contained in the three separately bound appendices to this report have been developed by the U. S. Army Engineer Waterways Experiment Station (WES) for the Directorate of Civil Works, Office, Chief of Engineers, U. S. Army. The publication of separate appendices based on geographical area of coverage, i.e., Great Lakes (Appendix E), Atlantic (Appendix F) and Pacific (Appendix G) will facilitate the utilization of these data by the various U. S. Army Corps of Engineers Division and District offices with primary interest in the specific regions under their responsibility. This Waterway Point Directory contains significant reference data relevant to each dock or other physical location from which any type of waterborne commodity has either been shipped or received at some time in the past. All landings, docks, wharfs, towns, and the numerous other locations (normally referred to in this report as "points") along the major navigable waterways and harbors in the subject regions of the continental United States are included in the Directory.

Similar data for the Mississippi Valley-Gulf Coast inland waterway system are reported in WES Miscellaneous Paper H-75-6.\*

---

\*L. L. Daggett and R. W. McCarley, "River Point Directory for the Mississippi River-Gulf Coast Inland Waterways System," Miscellaneous Paper H-75-6, May 1975, U. S. Army Engineer Waterways Experiment Station, CE, Vicksburg, MS.

Throughout the data gathering phase of the project, close coordination was maintained with key personnel within each pertinent Corps division and district office. As a result, these data for the Great Lakes, Atlantic, and Pacific waterway systems are considered highly accurate and complete, as of the dates of the source documents, and are considered as useful reference material for waterway simulation specialists, transportation planners, river navigation engineers, engineering economists, and other such specialists. However, should errors or omissions be discovered by any user, recommendations and/or comments regarding the Directory would be very much appreciated and will be included in a later revision or expansion of this data base.

The Directory was compiled by personnel of the Mathematical Hydraulics Division under the general supervision of Mr. H. B. Simmons, Chief, Hydraulics Laboratory, and Mr. M. B. Boyd, Chief, Mathematical Hydraulics Division. Mr. R. W. McCarley served as project engineer and was responsible for the production of the data and preparation of this report. Mr. R. T. Garner III assisted in formatting and editing the data and in the preparation of necessary computer programs for producing the Directory in final form for publication. Mr. J. L. Willers prepared and checked standardized coding sheets and assisted in locating and identifying the numerous coastal and waterway points included in the Directory. Ms. L. Thomas and Ms. C. Holmes prepared the initial code sheets and prepared the data for entry into computer data files.

Acknowledgement is made to the U. S. Army Engineer Waterborne Commerce Statistics Center (WCSC), New Orleans, and the various Corps

division and district offices for their cooperation and assistance at various times throughout the development of the Directory. Specifically, the following personnel directly assisted in the project by providing the county locations of the numerous obscure points which could not be located on available maps at WES.

Betty J. Klemba	Chicago District
Howard P. Woodlock, Jr.	New England Division
Carrol J. Herpel	Baltimore District
Andrienne P. Falls	Norfolk District
Max Schwartz	New York District
Edward M. Meyland, Jr.	Wilmington District
John T. Rivers, Jr.	Charleston District
Linda S. Sherrod	Jacksonville District
Steven D. Langston	Savannah District
Barbara D. Schmidt	South Pacific Division
Bonnie E. Ames	Portland District
Warren E. Waterman, Jr.	Seattle District

The Director of WES during the study and the preparation and publication of this report was COL G. H. Hilt, CE. Technical Director was Mr. F. R. Brown.

# CONTENTS

	<u>Page</u>
PREFACE . . . . .	1
PART I: INTRODUCTION . . . . .	5
Background. . . . .	5
Purpose . . . . .	7
Scope . . . . .	7
Approach. . . . .	10
PART II: GENERAL DESCRIPTION OF THE WATERWAY POINT DIRECTORY . . . . .	11
Directory Contents. . . . .	11
Sources of Information. . . . .	13
PART II: DESCRIPTION OF DATA ITEMS . . . . .	15
WCSC Point and Dock Codes . . . . .	15
Waterway Point Descriptive Name . . . . .	18
PMS Lock Codes. . . . .	18
Waterway Point Code . . . . .	19
Area Code . . . . .	20
State and County (or County Equivalent) Codes . . . . .	22
BEA Code. . . . .	23
SMSA Code . . . . .	23
WRA Code . . . . .	24
PART IV: FINAL COMMENTS AND OBSERVATIONS . . . . .	26
TABLE 1 . . . . .	28
APPENDIX A: DATA FORMAT FOR PRINTED DISPLAY OF THE WATERWAY POINT DIRECTORY . . . . .	A1
APPENDIX B: DATA FORMAT FOR THE MAGNETIC DATA TAPES . . . . .	B1
APPENDIX C: WATERWAY POINT CODES . . . . .	C1
APPENDIX D: AREA CODES . . . . .	D1
*APPENDIX E: WATERWAY POINT DIRECTORY FOR THE GREAT LAKES AREA . . . . .	E1
*APPENDIX F: WATERWAY POINT DIRECTORY FOR THE ATLANTIC COAST AREA . . . . .	F1
*APPENDIX G: WATERWAY POINT DIRECTORY FOR THE PACIFIC COAST AREA . . . . .	G1

\* Bound separately;



WATERWAY POINT DIRECTORY FOR THE  
GREAT LAKES, ATLANTIC, AND PACIFIC AREAS

PART I: INTRODUCTION

BACKGROUND

1. In recent years the Corps of Engineers (CE) has become increasingly cognizant of the necessity for carefully considering the relationship between the movement of commodities by water and by other available modes of transportation in the justification, planning and development of improved navigation facilities. In order to conduct the required analyses, a common basis for studying and comparing all modes of transportation must be developed. The problem lies in the conversion of detailed waterborne commerce origin-destination data to movement patterns that are compatible with available data describing the movement of commerce by rail and truck. In the past, such analyses and comparisons have been limited by the regional nature of the inland waterway system itself, i.e., limited to the Mississippi Valley-Gulf Coast area. An analysis of total waterborne commerce movement patterns for the entire Nation is required to eliminate these limitations. The availability of such information will also allow analysis of the movement patterns of waterborne commerce and the other modes of transportation on a common basis so that the role of waterborne transportation can be examined as a part of the national transportation system. The development of the data base described in this report, along with the now published River Point

Directory (WES Miscellaneous Paper H-75-6), is an initial step in that direction.

2. One of the Corps' ultimate goals in analyzing commodity movement data is the prediction of future waterborne commerce levels for use in determining long-range demands for waterway navigation facilities in the United States. The volume of various types of waterborne commerce depends largely upon projections of economic activity in the regions adjacent to the navigable rivers, lakes, coastal areas, and the many connecting waterways and channels. These projections are normally derived from information developed by the Office of Business Economics (OBE). In order to relate these projections to waterborne commerce, historical records of waterborne movements, as well as other transportation modes, must be developed on a common basis. This requires associating points of origin-destination for waterborne commodities with the OBE-defined regions, such as the Business Economic Areas (BEA). Since each BEA is formed by grouping counties or county equivalents, knowledge of the county location of a point along a waterway identifies the BEA in which the waterway point lies. This also makes the Standard Metropolitan Statistical Area (SMSA) and the Water Resources Area (WRA), which are developed by grouping counties, readily available. Thus, the SMSA and WRA of each point were easily included in the data base to also provide the capability of analyzing commodity movement patterns and quantities associated with these various geo-coding systems.

### PURPOSE

3. The primary purpose for developing this directory and the River Point Directory was to provide a means of relating waterborne commerce movement patterns, as compiled by the WCSC, to several different coding systems and categorizations that would be useful for analyzing waterborne commerce patterns, for projecting future waterborne traffic levels, for freight rate analysis studies, and for planning studies of waterway improvements. A secondary objective was to simply provide a basic data file of river point information, e.g., point type, state and county location, etc., for use by the various Corps division and district offices.

### SCOPE

4. The Waterway Point Directory is essentially a reference data base, in computer compatible format, which contains certain significant coded information for each of the numerous points (docks, wharfs, locks, islands, small towns, anchorages, etc.) located on the navigable waterways in and adjacent to the Great Lakes, and the Atlantic and Pacific Oceans. These data were compiled during the period of June through August 1975 by student employees under the supervision and guidance of WES staff personnel. The short title adopted for this data base is the "Great Lakes and Coastal Point Directory," as opposed to the "River Point Directory" published in May 1975 which includes similar, but not identical data for the Mississippi Valley-Gulf Coast (MV-GC) inland waterway system. The major differences in these two WES publications is briefly discussed in paragraph 7 below. The data base discussed

herein will normally be referred to throughout the remainder of this report as simply the "Directory."

5. The basic guide used to identify the waterway points involved in waterborne commerce activities was the U. S. Army Engineer Waterborne Commerce Statistics Center (WCSC) "Port and Dock Code Manual," (Part 1: Atlantic Area; Part 2: Mississippi Valley-Gulf Coast Area [Jacksonville District only]; Part 3: Great Lakes Area and Part 4: Pacific Area). All active waterway points contained in these manuals but not included in the River Point Directory are included in this report with the exception of the points located in the following areas, which were beyond the proposed scope of the project:

- a. Puerto Rico and the Virgin Islands
- b. Canada
- c. U. S. Army Engineer District, Honolulu
- d. U. S. Army Engineer District, Alaska

6. An example page of the data printed separately in Appendices E, F, and G is shown in Appendix A. In brief, Appendix A shows the type of data presently included in the Directory is as follows:

- a. WCSC port code
- b. WCSC dock code
- c. Point descriptive title
- d. Performance Monitoring System (PMS) lock code (Included for significant Corps locks only)
- e. Point type code.
- f. Area code (rather than a river code as included in the River Point Directory)



- g. State code
- h. County code
- i. Business Economic Area (BEA) code
- j. SMSA
- k. WRA

All of the items above will be explained in detail in Part III of this report.

7. As mentioned above, the River Point Directory is a companion publication to this report and includes data for the points along the major navigable waterways of the MV-GC area. More specifically, the River Point Directory contains data for all listings in the WCSC Port and Dock Code Manual, Part 2: Mississippi Valley-Gulf Coast Area, with the exception of the Jacksonville District listings; and it also contains the following listings from Part 3: Great Lakes Area:

- a. Illinois River, IL (WCSC Port/Dock Nos. 77000-77291)
- b. Calumet Harbor and River, IL & IN-South Chicago (WCSC 77641)
- c. Lake Calumet, IL (WCSC 77642)
- d. Calumet SAG Channel, IL (WCSC 77643)
- e. Chicago Sanitary and Ship Canal, IL (WCSC 77644)
- f. Chicago River South Branch, IL (WCSC 77645)
- g. Chicago River Main and North Branch, IL (WCSC 77646)
- h. Chicago Harbor, IL (WCSC 77647)

The major difference in the types of data compiled for the two directories is that the River Mile and the Waterways Freight Bureau (WFB) Tariff and Junction Indices are generally not applicable to the Great Lakes and coastal waterway system and have therefore not been included

in this data base. In addition, the WRA code, which was not included in the River Point Directory, has been included as a data item in this Directory. Since very few bridges were listed for the Great Lakes, Atlantic, and Pacific areas, vertical and horizontal clearance notations were considered of little importance and were normally not recorded. In the few incidences where data on bridges were readily available, they were recorded as part of the descriptive point title.

#### APPROACH

8. The approach taken to compile, record, and publish this massive volume of data was somewhat different than the methods used to generate the River Point Directory. The WCSC Port and Dock Code Manuals for each region were used as the basic source of information for identifying the points to be included in the Directory, since they include all points from which waterborne commerce movements originated or terminated during the year preceding publication of the manual. The location of each point was then determined from maps and other available source documentation. Once the location was determined, the desired geographical codes were easily obtained from available tables and maps. The point type code was based on the descriptive title in the WCSC code manual. When points could not be located or other questions arose, the pertinent district/division office was contacted and the required information was obtained. After the points had been coded, they were entered into computerized data bases, edited, and the printed Directory generated.

## PART II: GENERAL DESCRIPTION OF THE WATERWAY POINT DIRECTORY

### DIRECTORY CONTENTS

9. Appendix A consists of an example page which illustrates the format for the data recorded for each waterborne commerce shipping and receiving point. The following basic information was included for each point listed in the appropriate WCSC Port and Dock Code Manuals:

a. WCSC Port and Dock Code. The code used by WCSC to identify the originating and terminating points (shipping and receiving locations) in the movement of waterborne commodities.

b. Point Descriptive Title. A brief one-line description or nomenclature of a waterway point, normally taken directly from the WCSC Port and Dock Code Manual.

c. Point Code. The general category, e.g., commercial dock, landing, dredging site, Corps of Engineers facility, island, barge etc., of a point located on or adjacent to a waterway (see Appendix C).

d. Area Code. The area location of a point, based to the extent possible upon those areas for which total commodity tonnage movements have been reported by the WCSC in their publication, "Waterborne Commerce of the United States." Area codes are listed and briefly explained in Appendix D.

e. State Code. The state within which a point is located.

f. County Code. The county (or county equivalent) within which a point is located.

g. BEA Code. The BEA within which a point is located.

Counties and county equivalents are grouped into economically similar regions known as BEA's, and are frequently used as a basis for making economic projections and other regional economic analyses.

h. SMSA Code. The SMSA within which a point is located.

The general concept of an SMSA is one of an integrated economic and social unit with a recognized large population nucleus. They are composed of counties and portions of counties and named after the largest city in the SMSA. Not all waterway points are located within an SMSA; thus many of the points do not have an SMSA recorded in the Directory.

i. WRA Code. The WRA within which a point is located. The purpose of the WRA is to represent a geographic area with common or unique water management problems.

10. In addition to the data elements above, the Directory also contains the PMS lock code for the relatively few significant Corps' locks located in the subject regions. Very few bridges were listed in the WCSC manuals used to identify the waterway points; hence, the horizontal and vertical clearances of only a very small percentage of the existing bridges were included in this Directory, as they were in the River Point Directory.

11. As mentioned previously, the waterway data for the Great Lakes, Atlantic, and Pacific areas are printed in Appendices E, F, and G, respectively. The decision was made to bind each appendix separately because of the volume of data involved and the specific regional interest



of the Corps offices located throughout the United States. The data in each appendix are arranged in numerical sequence by WCSC port and dock code in the same sequence as shown in the pertinent WCSC Port and Dock Code Manuals. An index appears at the front of each of the subject appendices to assist the user in locating significant waterways and harbors of interest. The indexed waterways and harbors are listed by responsible Corps offices. More than one page number may appear in the index for a given waterway or harbor. This simply indicates the various pages on which a portion of the points associated with a given waterway or harbor may begin in the Directory. The nomenclature column also includes the WCSC port code(s) applicable to each waterway or harbor listed. The appearance of more than one port code indicates that the points on or adjacent to a given waterway or harbor may not be listed sequentially, hence the requirement to list more than one beginning page number for some of harbors, waterways, etc.

#### SOURCES OF INFORMATION

12. In general, the information contained in the Directory was obtained from nine different types of references. The referenced documents were published by various Federal agencies and can normally be obtained from the responsible office on request. Machine-run copies of some of the source documents can also be obtained on request from the U. S. Army Engineer Waterways Experiment Station (WES), ATTN: WESHM. Table 1 contains pertinent information relative to the source references.

13. When certain information such as a county location could not be determined by using the available reference material at WES, knowledgeable personnel in the appropriate Corps division and district offices were contacted for assistance. Through their cordial assistance and prompt response, the data contained in the current Directory are considered to be of the highest reasonable accuracy and comprehensiveness. The assistance rendered by those who contributed materially to the content and quality of this project is acknowledged in the Preface to this report.

### PART III: DESCRIPTION OF DATA ITEMS

14. A description of the Waterway Point Directory and the major efforts and observations associated with its development is presented in this section. The discussion to follow addresses in detail each data item in the order listed in the Directory.

#### WCSC PORT AND DOCK CODES

15. Each existing point along the Great Lakes and the Atlantic/Pacific Coasts has been assigned an identification number by the WCSC in cooperation with the various Corps district and division offices. This number is referred to as the port and dock code. Most of the codes appearing in the Directory were extracted from the appropriate parts of the WCSC Port and Dock Code Manual. In general, port and dock codes are generated as described in ER 335-2-1. Pertinent information paraphrased from the ER is included below for ready reference.

16. The port code is a five-digit code, the first digit of which indicates major geographical areas of the U. S.; the second digit indicates the district within the major areas; the third, fourth, and fifth digits signify individual port, section within a port, waterway or mile station. The dock code consists of three digits, and designates the dock, wharf, pier, etc. within the port. Port codes are assigned by WCSC for each point from which waterborne commodities are shipped and/or received; dock codes are assigned by the district

engineer offices and transmitted to WCSC for inclusion in the appropriate manual. Port and dock codes are set by either the base-line or the mileage methods.

17. Under the base-line method, the Great Lakes and Coasts are scaled off, and numbers progressively assigned to the ports and localities in rough geographic order beginning in the New England Division. Normally, all points within a port or along a river, creek, etc. have been assigned the same five-digit port code, with different dock codes listed for each point. Quite often the same port/dock code is given for two differently titled points. This was perhaps done to indicate that the two, three, or more different points with the same dock code are physically located on the same dock. On the other hand, the name of the point may have changed and both the old and new description title listings are being retained in the manual. In any event, the port and dock codes, as published by WCSC, are used in the Directory with the only exceptions being as described in paragraph 20.

18. Under the mile-station method, the first digit of the dock code indicates tenths of a mile, the second digit the wharf or dock number at the particular point, and the third digit consists of one of the following codes:

- a. 1-right bank (downstream)
- b. 2-left bank (downstream)
- c. 3-right bank tributary
- d. 4-left bank tributary



- e. 5-island or foreign traffic only
- f. 6-lock, dam, or bridge
- g. 7-9-other (used most often to identify the various docks,

19. The mile-station method is used in assigning port and dock codes to localities on most rivers and canals. The mile-station is the number of miles above zero point, usually the mouth of the river. Certain waterways, such as the York River and the Minnesota River (The Minnesota River is included in the River Point Directory), have been assigned dock codes according to the base-line method, starting at 000 on the left bank at the mouth and scaling up the left bank and down the right bank to 999 at the mouth.

20. A few new port/dock codes were created in-house at WES to enable the incorporation of all significant Corps navigation lock into the Directory. Each new code assigned to a lock was based upon the geographical location of the lock to the extent practical. Since relatively few locks exist in the areas covered by the report, only a small number of new codes were added to the current WCSC file. In some cases port/dock codes and descriptions were deleted from the Directory in response to information received directly from contacts within the division and district offices. Such points either no longer exist as described or else have not been involved in waterborne commerce activities for many years.

#### WATERWAY POINT DESCRIPTIVE NAME

21. In most cases, the same descriptive title that appears in the WCSC manual was used. If the number of characters exceeded space limitations, the WCSC title was abbreviated so as not to exceed 39 characters in length. In some instances the descriptive title of a junction point at the beginning of a relatively major river was expanded to more clearly identify the river on which the point data that followed would be applicable and also to indicate the name of the river, bay, etc. with which the primary river junctions. For example, the WCSC description of the first point on the Yaquina River, OR, is simply "YAQUINA RIVER OR." The descriptive title in this incidence was expanded in the Directory to "JCT YAQUINA RIVER OR W/YAQUINA BAY." Minor revisions were also made to some of the other WCSC point names to more clearly and adequately identify them.

22. The descriptive titles of quite a number of the docks include the commodity or commodities that are shipped or received by the docks. As an example, the dock entitled, "MEDUSA PORTLAND CEMENT R-COAL & STONE" indicates that the commodities coal and stone are received at the Medusa Portland Cement dock. The point titles in the previously published River Point Directory do not include this information.

#### PMS LOCK CODES .

23. PMS lock codes were inserted in the last two character positions of the descriptive title for each Corps navigation lock listed. The codes applicable to the locks included in this Directory are all

contained in Change 1 to EC 335-2-18, Implementation of the Performance Monitoring System, dated 2 January 1975. One or two of the small Corps locks, which service pleasure craft only, were not included in the data.

#### WATERWAY POINT CODE

24. Each waterway point was assigned a two-digit point type code from the list shown in Appendix C. These codes permit the grouping of like points into specific categories for further analysis. Most of the categories of point codes shown in Appendix C are considered significant or potentially significant in studies of waterborne commodity movements. A few of the point categories were included simply because of their numerous repetitive occurrences within the data file. The titles and codes in the appendix coincide to the extent practical with the previously published River Point Directory coded but were greatly increased in detail in order to more accurately identify the most significant waterway points located in the Great Lakes and Coastal areas. This expanded set of codes was developed in-house by WES and approved by the Office, Chief of Engineers (DAEN-CWP-S).

25. The rules used to assign codes to each waterway point differed somewhat from those used during the development of the River Point Directory. If a point could not be located on the pertinent map, chart or aerial photograph, of the waterway, it was coded either 88 or 99 in the Directory. Code 88 indicated that the point was not included on the map but that its location was identifiable through the WCSC code, i.e., the river mile was encoded in the three-digit dock code.

The 99 simply meant the point type was unknown, i.e., it could not be verified through use of either the maps or the WCSC code system. In contrast, the descriptive title of a point was used whenever possible to determine its classification in the Great Lakes and Coastal Point Directory. The appropriate Port Series Report, published by the Board of Engineers for Rivers and Harbors, was used to obtain data for many points within major harbors. Contacts in the district and division offices were used when necessary to assist in this coding.

26. The point codes 11 and 12 indicate the beginning and ending, respectively, or a major port. The WCSC publication, Waterborne Commerce of the United States (1972), was used as a guide in determining the ports for which the beginning and ending points were indicated. In most cases all points within a major port are assigned a single five-digit WCSC port code. Some of the largest U. S. ports may, however, each be assigned more than one port code.

#### Area Code

27. The area codes used in the Directory are listed in Appendix D by major region, i.e., Great Lakes, Atlantic, and Pacific. These codes were developed in-house by WES and approved by the Office, Chief of Engineers (DAEN-CWP-S) for use in designating the primary rivers, harbors, ports, etc. of interest within the three major regions. With the exception of the Great Lakes area, the list of area codes was formulated by using WCSC's 1972 Waterborne Commerce of the United



States to identify significant waterways, harbors, and ports in regard to commodity movements. A different area code is assigned to each lake, river, etc. that is grouped by port code in the WCSC Port and Dock Code Manual.

28. The coded areas can be grouped into the following three categories, as indicated by the footnotes in Appendix D.

a. Those marked with a "\*" are identical to the rivers, harbors, bays, ports, etc. listed separately as major headings (or listed under "Other Harbors and Waterways") in Section I, Freight Traffic, of the appropriate Waterborne Commerce of the U. S. publication. The descriptive titles given such areas are identical to those shown in Waterborne Commerce of the U. S.

b. Those marked with "#" bear the same title as the significant waterways and harbors in Section I of Waterborne Commerce but are not necessarily the identical areas, i.e., such areas are not necessarily composed of the same docks used to compute the tonnages reported categorically by WCSC. The "Explanation" column in Appendix D will normally describe the portions of the WCSC Port and Dock Code manuals included in such areas.

c. Those areas not preceded by either "\*" or "#" are composed of the waterways, harbors, etc., described in the "Explanation" column. These areas were defined internally at WES and do not in any way coincide with the major harbors and waterways listed in Waterborne Commerce. In most cases the numerous minor waterways and harbors tributary to and/or adjacent to some of the major waterways were grouped to form a single area.

#### STATE AND COUNTY OR COUNTY EQUIVALENT

29. The state and county codes used in the Directory are contained in FIPS Publication 6-2, "Counties and County Equivalents of the States of the United States." The state and county locations for each waterway point were usually readily determinable through the use of a Rand McNally Road Atlas. State and county line boundaries are clearly delineated on the maps contained in this atlas. The harbors, ports, etc. thus located on the map could be accurately coded, unless split by a state or county line. Since the individual docks and other such points do not appear on these maps, the atlas could not be used to determine state and county codes for harbors, bays and ports located near a boundary line or for points along waterways that serve as boundary lines. Larger scale reference maps such as the NOAA Nautical Charts and the charts contained in the Corps' Port Series reports had to be employed for such detail. However, these charts did not normally include the state and county boundary lines. If a point could not be located on any of the maps available at WES, the informal assistance of knowledgeable division and district personnel was solicited in order to accurately determine the county location. In all cases, the field offices responded promptly to enable the accurate recording of almost all state, county, BEA, SMSA, and WRA codes.

30. A limited number of points had to be assigned state and county codes of "99" and "999," respectively. These codes are usually associated with points which either could not be located or else the

point is associated with more than one state or county, e.g., a bay located in more than one county.

#### BEA CODE

31. As a background, BEA's were designed by the Office of Business Economics to facilitate programs of regional measurement, analysis, and projections of economic activity. BEA's consist of urban centers, each with its own hinterland, in which the establishments, both business and households, are functionally related. One of the main characteristics of the BEA's is that each combines the place of work and the residence of its labor force and, therefore, reflects a minimum of commuting across the area boundaries. BEA's were identified through the state and county identity.

32. For the purposes of the Directory, the BEA code of each point was determined by locating the appropriate county on an available BEA map. The code "999" was used sparingly in lieu of a BEA code for reasons similar to those given above for using all nines in the state and county code fields.

#### SMSA CODE

33. SMSA's are delineated to include at least one city with 50,000 or more inhabitants. The SMSA encompasses the county of such a central city and adjacent counties or county segments that are metropolitan in character and economically and socially integrated with the county of the central city. In the New England area the central city concept still prevails as a basis for the SMSA coding system but the units comprising each SMSA are the towns rather than

the counties. For more detailed information on the criteria used in establishing SMSA's, see FIPS Publication 8-3.

34. The SMSA codes used in the Directory were obtained from the FIPS Publication 8-3 dated 15 August 1973. The SMSA's are listed by Publication 8-3 in alphabetical order with the appropriate counties and county segments listed immediately following the SMSA title. Many counties do not meet the definitive requirements to be included in an SMSA; thus many waterway points in the Directory are not assigned a SMSA code.

#### WRA CODE

35. The Water Resources Planning Act (P.L. 89-80) directs the Water Resources Council, Washington, DC, to "maintain a continuing study and prepare an assessment ... of the adequacy of supplies of water necessary to meet the water requirements in each water resource region in the United States and the national interest therein." The Act further directs the Council to "maintain a continuing study of the relation of regional or river basin plans and programs to the requirements of larger regions of the Nation." The Council approved plan for fulfilling the responsibilities is called the National Assessment of Water and Related Land Resources. The National Assessment, reported every five years, provides a general appraisal of the overall water supply and requirements situation, including environmental quality aspects, and of future national needs for water-related goods and services based upon correlated projections of population and economic activity in each region of the Nation. WRA codes were therefore included in the Directory to augment these appraisals by enabling the



computation and projection of commodity tonnage movements between WRA's.

36. There are 220 subregions that were developed from the 21 Water Resource Regions (18 in the conterminous United States, plus Alaska, Hawaii, and Puerto Rico) in order to create small enough areas for more accurate data collection and analysis. A subregion includes that area drained by a river system; reach of a river and its tributaries in that reach, a closed basin(s); or a group of streams forming a coastal drainage area. A subregion is intended to represent a geographic area with common or unique surface water management problems. As more information about groundwater resources is developed, it may become desirable to identify separate groundwater areas for interaction with surface water analysis.

37. In addition to drainage area boundaries, each subregion was delineated along those county boundaries which most nearly approximate the drainage boundary. The results were the formation of the WRA's (often referred to as "subareas"). The formation of WRA's was necessary to prevent the separation of a metropolitan area into two or more subregions and to develop approximate data series for subregions from data sources which use counties as the lowest unit of geographic detail. After the county location of a point in the Directory was determined, the Water Resources Council map of Subareas and Aggregate Subareas for the 1975 Assessment was used to record the pertinent WRA code.

#### PART IV: FINAL COMMENTS AND OBSERVATIONS

38. The data contained in the Great Lakes and Coastal Directory were carefully extracted from the source documents and laboriously edited. When data for certain waterway points could not be obtained from the maps and publications at WES, every effort was made through coordination with the division and district offices to include the correct codes in the data base. As a result, these data should provide reliable and reasonably accurate results in future studies of commodity tonnage movements associated with any or all of the geocoding systems presented.

39. During the data compilation phase and discussions with the division and district offices, it became apparent that many of the individual points listed in the WCSC Port and Dock Code manuals either no longer exist as described or else play no roll in the shipment or receipt of waterborne commodities. A few of these port/dock codes were eliminated from the Directory upon request of the pertinent division or district offices. In the interest of time, however, the points as contained in the WCSC manual were listed and coded without regard to their current operational status. Only a few waterway points were added to listings as updated information was voluntarily offered by division or district personnel.

40. One particular inconsistency which appeared in the WCSC Port/Dock Code Manuals was clarified in the Directory. Fernandina, Florida (Port No. 13224) and the Atlantic Intercoastal Waterway between

Fernandina and St. Johns River, Florida (Port No. 13785) are included under both the Savannah and the Jacksonville Districts in the manuals. The publication, Waterborne Commerce of the United States, includes these two port listings under the Jacksonville District only, even though the thirteen thousand series of port numbers is assigned to the Savannah District. Following confirmation from WCSC, the Port listings 13224 and 13785 were eliminated from the Savannah District data in the Directory to avoid duplication.

41. Users of these data are asked to forward any suggested revisions, corrections, or additions to WES (ATTN: WESHM).

TABLE 1

<u>Data Source References</u>		
<u>Title of References</u>	<u>Published by</u>	<u>Data Extracted</u>
WCSC Port and Dock Code Manuals (Part 1, 1974 & Parts 2, 3, & 4, Jan 73)	USAE Waterborne Commerce Statistics Center, P.O. Box 61280, New Orleans, LA 70161	WCSC waterway point identification codes, i.e., a 5-digit port code & 3-digit dock code & a brief description
Port Series Reports	The Board of Engineers for Rivers & Harbors, U. S. Army Corps of Engineers	Waterway point types & the state & county locations of points
Nautical Charts	National Ocean Survey, National Oceanic & Atmospheric Administration	State & county locations of points
Rand McNally Road Atlas, 1st Annual ed. (Library of Congress Catalog Card Number: 75-654428)	Rand McNally & Co. Offices, P. O. Box 7600, Chicago, IL 60680; 10 E. 53rd St. New York, NY 10022; 206 Sansome St., San Francisco, CA 94104	State & county locations
IPS Publication 6-2, Counties & County Equivalents of the States of the U. S.	National Bureau of Standards, U. S. Dept. of Commerce	State & county (or county equivalent) codes
EA Map (county boundaries as of 30 Sep 69, area Names updated Mar 72)	Regional Economics Div, Bureau of Economic Analysis, U. S. Dept. of Commerce	BEA codes for counties (or county equivalents) in which waterway points are located
IPS Publication 8-3, Standard Metropolitan Statistical Area (SMSA), 5 Aug 73	National Bureau of Standards, U. S. Dept. of Commerce	SMSA Codes for the counties (or county equivalents) in which points are located, if applicable



Table 1 (continued)

Title of References	Published by	Data Extracted
Subareas & Aggregated Subareas for the 1975 Assessment	Water Resources Council Washington, DC	WRA codes for counties ( or county equivalents)
Engineer Circular (EC) 335-2-18, 2 Jan 75 & Change 1, 14 May 75, Implementation of the Performance Monitoring System (PMS)	Dept. of the Army, Office of the Chief of Engineers (DAEN-CWO-M), Washington, DC 20314	PMS lock codes

APPENDIX A: EXAMPLE PAGE OF THE WATERWAY POINT DIRECTORY

MSC PORT	MSC DOCK	POINT DESCRIPTION	PT CD	AR CD	ST	CO	BEA	SMSA	NRA
0001	000	ATLANTIC OCEAN OFF NEW ENG COAST	13	NZ	99	999	999	9999	9999
0001	100	OFFSHORE	13	NZ	99	999	999	9999	9999
0001	100	JCT ST CROIX R ME W/ PASSANAUDDY BAY	17	NZ	23	999	1	9999	101
0001	100	SEINES	70	NZ	23	999	1	9999	101
0001	100	FISHING AREA	70	NZ	23	999	1	9999	101
0001	555	FOREIGN TRAFFIC ONLY	5	NZ	23	29	1	0	101
0001	985	FRONTIER STEAMER CO WHARF	1	NZ	23	29	1	0	101
0001	986	MICCHIES SONS LUMBER CO	1	NZ	23	29	1	0	101
0001	990	TOTD WHARF	1	NZ	23	29	1	0	101
0001	991	BAFNARD WHARF	1	NZ	23	29	1	0	101
0001	992	BOARDMAN WHARF	1	NZ	23	29	1	0	101
0001	993	WATERS WHARF	1	NZ	23	29	1	0	101
0001	996	DEAD RIVER OIL CO WHARF ESSO	61	NZ	23	29	1	0	101
0001	997	REF REACH	16	NZ	23	29	1	0	101
0001	999	ROBINSON	19	NZ	23	29	1	0	101
0001	000	PERRY ME	19	NZ	23	29	1	0	101
0001	100	SEINES	70	NZ	23	29	1	0	101
0001	200	WEIRS	25	NZ	23	29	1	0	101
0001	300	ANCHORAGE	60	NZ	23	29	1	0	101
0001	000	JCT MOOSE RIVER ME WITH MOOSE COVE	8	NZ	23	29	1	0	101
0001	100	SEINES	70	NZ	23	29	1	0	101
0001	200	WEIRS	25	NZ	23	29	1	0	101
0001	500	TOWN DOCK	19	NZ	23	29	1	0	101
0001	000	HAYCOCK HARBOR ME	19	NZ	23	29	1	0	101
0001	500	TOWN DOCK	65	NZ	23	29	1	0	101
0001	000	COFS COOK BAY MAINE	9	NZ	23	29	1	0	101
0001	100	SEINES	70	NZ	23	29	1	0	101
0001	300	ANCHORAGE	60	NZ	23	29	1	0	101
0001	400	EAST BAY ME	9	NZ	23	29	1	0	101
0001	500	PEBBROKE MAINE	19	NZ	23	29	1	0	101
0001	500	SUNSET MOBILE CO	61	NZ	23	29	1	0	101
0001	000	JCT PENNAQUAN R ME W/ COFS COOK BAY	7	NZ	23	29	1	0	101
0001	490	SUNSET PACKING CO	1	NZ	23	29	1	0	101
0001	000	MOOSE COVE ME	9	NZ	23	29	1	0	101
0001	500	TOWN DOCK	65	NZ	23	29	1	0	101
0001	000	EASTPORT HBR ME	19	NZ	23	29	1	0	101
0001	100	SEINES	70	NZ	23	29	1	0	101
0001	200	WEIRS	25	NZ	23	29	1	0	101
0001	300	ANCHORAGE	60	NZ	23	29	1	0	101
0001	531	MAINE SARGINE COMPANY	1	NZ	23	29	1	0	101
0001	541	PAIS PEARL WHARF	1	NZ	23	29	1	0	101
0001	555	FOREIGN TRAFFIC ONLY	5	NZ	23	29	1	0	101
0001	601	RIVIERA PACKING CORP WHARF	1	NZ	23	29	1	0	101
0001	617	PEACOCK R J CANNING CO	1	NZ	23	29	1	0	101
0001	690	BEARDSLEYS WHARF WALLACE	1	NZ	23	29	1	0	101
0001	723	MACHIASPORT CANNING CO WHARF	1	NZ	23	29	1	0	101
0001	735	HOLMES PACKING CO	65	NZ	23	29	1	0	101
0001	736	CITY DOCK	1	NZ	23	29	1	0	101
0001	741	HOLMES PACKING CO	1	NZ	23	29	1	0	101
0001	745	HEARL COMP	1	NZ	23	29	1	0	101

APPENDIX B: DATA FORMAT FOR THE MAGNETIC DATA TAPES





APPENDIX C: WATERWAY POINT CODES

## WATERWAY POINTS CODES

	<u>Code</u>
 I. Commercial	
(1) Commercial docks, wharves, piers, slips, berths, terminals, & bulkheads	01
(2) Landings & ramps	02
(3) Anchorages, moorings, dolphins, & basins	60
(4) Fuels, petroleum, oil companies, & refineries	61
(5) Contractor docks & construction sites	62
 (6) Excursions, steamship lines, & boat lines	 63
(7) Marinas & yacht clubs	64
(8) City docks, piers, wharves, & public landings	65
(9) Bulk material distributors (sand, gravel, iron ore, lumber, cement, etc.)	66
(10) Grain companies & elevators	67
 (11) Power companies	 68
(12) Shipyard, ship repairs, boatworks, etc.	69
(13) Fishing banks, fisheries, & fishing company docks	70
(14) Coal distributors	71
(15) Iron & steel companies & other metal companies	72
 (16) Chemical companies	 73
(17) Dredging sites or areas	74
 II. U. S. State, City, & Local Government	
(1) Corps of Engineers facilities	90
(2) U. S. Bureau of Customs facilities	91
(3) United States Coast Guard facilities	92
(4) Other military facilities	93
(5) Emergency facilities (fireboat piers, hospitals, etc.)	94
 (6) Port authorities & Unified Port Districts	 96
(7) Universities, institutions, & research facilities	97
(8) Other Federal, State, city, and local facilities	98
 III. Geographic	
(1) Canals, channels, river mouths, junction points, & narrows	07
(2) Small creeks or rivers, sloughs, & junctions of a non-maintained waterway	08
(3) Bays, coves, small connecting inland lakes, sounds, breakwaters, & inlets	09

# WATERWAY POINT CODES (Continued)

	<u>Code</u>
(4) Begin major port	11
(5) End major port	12
(6) Major lakes, open water, & offshore instream listings	13
(7) Islands	15
(8) Bluffs, capes, peninsulas, points, mountains, flats, beaches, sand bars, and shoals	16
(9) Small towns, State parks, recreation areas & minor harbors	19
(10) Begin right bend	21
(11) End right bend	22
(12) Begin left bend	31
(13) End left bend	32
(14) Jetties, weirs, dams, & levees	25
IV. Navigation & Transportation	
(1) Ferries & water taxis	04
(2) Locks	06
(3) Lighthouses, light ships, & other lights	23
(4) Buoys	24
(5) Airports	26
(6) Railroads & railways	27
(7) Bridge-type unknown	50
(8) Bridge-draw	51
(9) Bridge-lift	52
(10) Bridge-fixed	53
(11) Bridge-swing	54
V. Miscellaneous	
(1) Foreign traffic only	05
(2) Unknown	99



APPENDIX D: AREA CODES

TABLE D1  
AREA CODES FOR THE GREAT LAKES REGION

Waterway	Area Code	Port Series Codes Included
St. Lawrence River	SL	70001-70499
Lake Ontario	LO	71000-71498
Lake Erie, Niagara River & Falls	LE	72000-72499
Detroit River	DR	73000-73499
St. Clair River	LC	75000-75020
Lake Huron	LH	76000-76250
Lake Michigan	LM	77410-77632; 77656-77991
St. Mary's River	SM	78000-78200
Lake Superior	LS	79000-79430

TABLE D2  
AREA CODES FOR THE ATLANTIC COAST

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
<u>New England Division</u>			
Penobscot River & Bay	PB	00250, 00258, 00259, 00265, 00271, 00273, 00276-00357	Includes primarily these listings from WCSC Port & Dock Code Manual (Part 1): Deer Isle; N. W. Harbor ME; Isle Au Haut, ME; and coastal areas between "Eagle Island, ME," & "Rockland Harbor, ME."
*Portland Harbor, ME	ME	00543, 00546, 00547	
#Portsmouth Harbor, N.H.	PM	00600, 00610	As listed in the WCSC Manual (Part 1), & including Piscatqua River.
*Gloucester Harbor, MA	GL	00660	
*Beverly Harbor, MA	BH	00670, 00673	As listed in the WCSC Manual (Part 1) & including Danvers River, MA.
*Salem Harbor, MA	SH	00675	
*Main Water-Front, Boston, MA	BM	00701	
*Chelsea River, Boston, MA	BC	00702	
*Mystic River, Boston, MA	BY	00703	
*Weymouth Fore River, Boston, MA	BF	00711	
*Town River, Boston MA,	BN	00712	
*An area composed of the identical points (docks, wharfs, piers, landings, bays, etc.), to the degree of accuracy possible, as the selected waterway or port bears the same name in the appropriate WCSC publication on Waterborne Commerce of the U.S. (1972)			
# An area bearing the same name as that of a selected waterway or port in the appropriate WCSC publication but which does not necessarily contain the same identical points.			
NOTE: Areas not preceded by either "*" or "#" are composed of the waterways, harbors, etc. as described in the Explanation column.			

TABLE D2 (Cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
Other Water- Fronts, Boston, MA	BO	00704-00710, 00713	Includes Island End River, Malden River; Little Mystic River; Charles River; Fort Point Channel; Dorchester Bay; Neponset River, & the Weymouth Back River.
*Cape Cod Bay & Canal, MA		00760, 00765	As listed in the WCSC Manual (Part 1) & including Cape Cod Bay, MA.
*New Bedford & Fairhaven Harbor, MA	NF	01294	
*Fall River Harbor, MA	FR	01346, 01347	As listed in the WCSC Manual (Part 1) & including Taunton River, MA.
*Providence River & Harbor, RI	PV	01379	
*Seekomk River, RI	SR	01380	
#Thames River, CT	TH	01525, 01526	As listed in the WCSC Manual (Part 1) & including New London Harbor, CT.
Connecticut River, CT	CN	01567, 01569	Includes Connecticut River both below & above Hartford, CT.
*Main Harbor, New Haven, CT	NH	01646-01649	As listed in the WCSC Manual (Part 1) & including Quinnipiac River; West River; & Mill Rivers.
*Housatonic River, CT	HR	01675	
*Bridgeport Harbor, CT	BD	01680-01687	Includes East, West, & Cedar Branches; Yellow Mill Channel; Poquonock & Johnson Rivers; Black Rock Harbor; & the Main Harbor.
*Norwalk Harbor, CT	NO	01710	



TABLE D2 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
*Stamford Harbor, CT	ST	01720, 01728	
Small ports, rivers, etc., New England Div	NZ	00001-00249, 00251- 00257, 00260-00264 00266-00270, 00272, 00274, 00275, 00358- 00542, 00550-00598, 00601, 00611-00645, 00674, 00678-00690, 00715-00755, 00766- 01258, 01300, 01342, 01343, 01360, 01370, 01375, 01381-01500, 01546, 01550, 01555, 01570-01632, 01668, 01697, 01706, 01712, 01715, 01735, 01738, 01739, 01745	Includes minor coastal areas between "Atlantic Ocean off New England Coast" & "Duck Island, ME;" & between "Spruce Head Island, ME" & "Butter Island, ME;" & between "Swan Island, ME" & "Atlantic, ME;" & between "Heron Island, ME" & "Brimstone Island, ME;" also includes Matinicas Island, ME, Ship Island, ME, & N. Sedgewick, ME; & the minor coastal areas between "Tenants Harbor, ME" & "Cumberland, ME; & between "Richmond Island Harbor, ME" & Pepperell Cove, NH;" & between "Little Harbor, NH" & "Rockport Harbor, MA;" Manchester Harbor, MA; Bakers Island, MA; & between "Marblehead Harbor, MA" & "Massachusetts Bay, MA;" & between "Quiney Bay, MA" & "Mattapoisett Harbor, MA;" & between "Barnstable Harbor, MA" & "Woods Hole Channel, MA;" Westport River, MA; Sakonnet River, RI, Sakonnet Harbor, Sakonnet PT, RI; Bristol Harbor, RI; Warren River, RI; Bullocks Point Cove, RI; & between "Pawtuxet Cove, RI" & "Mystic River, CT;" Niantic Bay & Harbor, CT; Plum Island, NY; & between "Eightmile River, CT" & "Farm River, CT;" Milford Harbor, CT; Southport Harbor, CT; Westport Harbor, Saugatuck River, CT; Wilson Point, CT; Fivemile River Harbor, CT; Mianus River & Cos Cobb Harbor, CT; Greenwich Harbor, CT; Little Captains Island; Island Beach, CT.

TABLE D2 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
<u>New York District</u>			
*Port Chester Harbor, NY	PC	02110, 02115, 02118	
*East Chester Creek, NY	EC	02170	
*Manhasset Bay, NY	MB	02180, 02181	
#East River, NY	ER	02210, 02213, 02215, 02217	Includes all East River areas listed in the 1974 WCSC Manual (Part 1).
*Westchester Creek, NY	WC	02230, 02232	
*Bronx River, NY	BX	02240	
*Flushing Bay & Creek, NY	FL	02250, 02255	All Flushing Bay areas listed in the WCSC Manual (Part 1).
#Newtown Creek, NY	NC	02260, 02264, 02266, 02268, 02269	All Newton Creek areas listed in the WCSC Manual (Part 1).
#Harlem River, NY	HM	02310, 02315	All Harlem River areas listed in the WCSC Manual (Part 1).
*Buttermilk Channel, NY	BU	02410	
#Gowanus Creek Channel	GO	02430, 02433, 02440	All Gowanus Creek Channels listed in the WCSC Manual (Part 1) & including Gowanus Creek Canal, NY.
*Bay Ridge & Red Hook Channels	BZ	02470, 02475	
Gravesend-Jamaica Bay Area, NY	GJ	02500-02599	Includes Gravesend Bay, Coney Island Creek, Coney Island Channel, Sheepshead Bay, East Rockaway Inlet, & Jamaica Bay.
#Upper Bay Area, NY & NJ	UB	02700-02799	Listed as a major grouping in the WCSC Manual (Part 1).

TABLE D2 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
#New York & New Jersey Channels	NY	02821-02825	Includes the Main Ship Channel to Smith Creek, NJ; Smith Creek to Piles Creek, NJ; Piles Creek to Kill Van Kull; Channel South of Shooters Island; Housman Ave. to St. Georges, S.I.
#Raritan River, NJ	RR	02801, 02805, 02811-02816	Includes Washington Canal & South River, Raritan River Main Channel, Raritan River, Raritan River South Channel, & also Delaware & Raritan Canal.
*Newark Bay, NJ	NB	02860-02864	Includes the entire Newark Bay as listed in the WCSC Manual (Part 1)
#Hackensack River, NJ	HA	02870, 02871	All Hackensack areas listed in the WCSC Manual (Part 1).
*Passaic River, NJ	PS	02880-02882	All Passaic River listings in the WCSC Manual (Part 1)
Hudson River,	HU	02900-02902, 02905, 02907, 02909, 02910-02913, 02915, 03000-03648	Includes Hudson River Channel, Hudson River, & the New York State Barge Canal.
Narrows of Lake Champlain & Lake Champlain	LN	03650-03786	Listed as major groupings in the WCSC Manual (Part 1).
*Hempstead Harbor, LI	HH	03805, 03808	
#Huntington Harbor, NY	HB	03820, 03825	Includes Huntington Harbor & Bay.
*Port Jefferson Harbor, NY	PJ	03840	

TABLE D2 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
Small ports, rivers, etc. New York Dist	NX	02000, 02120-02160, 02190, 02195, 02290, 02610-02695, 02830, 02840, 02850, 03809-03818, 03829-03839, 03842-03995	Includes Atlantic Ocean off NYD coast; small coastal areas between "Long Island Sound at Rye Beach, NY" & "City Island, NY;" Long Island Sound, LI shore in Port NY; Little Neck Bay, NY; Wallabout Channel, NY; & between "Sandy Hook Bay, NJ" & "Hoffman & Swinburne Island Chan;" Woodbridge Creek, NJ; Rahway River, NJ; Elizabeth River, NJ; & between "Glen Cove Harbor, LI, NY" & "Cold Spring Harbor, LI, NY;" & between "Eatons Neck, LI, NY" & "Smithtown Bay, LI, NY;" & between "Mt. Sinai, LI, NY" & "Shark River, NJ."

Philadelphia District

*New Jersey IWW	NJ	04001-04099	Listed as major grouping in the WCSC Manual (Part 1).
New Jersey Coast Inlets, Rivers, Ports, etc., not on the NJ IWW	NI	04100-04240	Listed as a major grouping in the WCSC Manual (Part 1).
Delaware River, New Jersey Side	DN	04300-04392	Listed as a major grouping in the WCSC Manual (Part 1).
Delaware River, Pennsylvania-Delaware Side	DP	0400-04495	Listed as a major grouping in the WCSC Manual (Part 1).
Delaware River Tributaries, NJ Side	DJ	04500-04585	Listed as a major grouping in the WCSC Manual (Part 1)
Delaware River Tributaries, Penn.-Del. Side	DD	04600-04689	Listed as a major grouping in the WCSC Manual (Part 1).
Minor ports, rivers, etc., Philadelphia Dist		04000	Includes Atlantic Ocean off Philadelphia Dist.



TABLE D2 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
<u>Baltimore District</u>			
*Pocomoke River, MD	PO	05120	
*Wicomico River, MD	WR	05175	
#Nanticoke River, DE & MD	NA	05176-05180	Also includes Nanticoke, MD; Tyaskin Creek, MD; Broadcreek River, DE; & Nanticoke River at Bivalve, MD.
#Choptank River, MD	CT	05269-05273	Also includes Tuckahoe River, MD, La Trappe River, MD, Cambridge Harbor, MD, & Warwick River, MD.
#Tred Avon River, MD	TV	05279, 05280	Also includes Town Creek, MD
*Baltimore Harbor & Channels, MD	BE	05550	
Potomac River & Tributaries	PO	06001-06112	Includes Potomac River & tributaries.
#Patuxent River, MD	PU	06510-06525	Includes Patuxent River & tributaries
Small ports, rivers, etc., Baltimore Dist	BQ	05000-05118, 05121-05173, 05183-05268, 05290-05530, 06540	Includes minor coastal areas between "Atlantic Ocean off Balt. Dist. coast" & "Doe Creek to Fishing Creek, VA;" & between "Shad Landing State Park, MD," & "Danes Quarter Creek, MD;" & between "Fishing Bay Tributaries, MD" & "W.W. from little Choptank River to Choptank;" & between "Black Walnut Harbor, MD" & North Point, Baltimore County, MD;" & between "Chesapeake Bay-Open Waters" & Atlantic Ocean off Wash, DC coast;" & St. Jerome Creek, MD.
<u>Norfolk, VA District</u>			
*Cockrell Creek, VA	CW	06590	
#Rappahannock River, VA	RA	06640-06800	Includes Rappahannock River & its tributaries.

TABLE D2 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
#York River, VA	YK	10260-10272	Includes York River & its tributaries.
#James River, VA	JR	10326-10402	Includes James River & its tributaries.
*Little River (Creek), VA	LR	10414	
*Atlantic IWW	IW	10500-10835	Includes Norfolk District section of the AIWW from Norfolk, VA, to St. Johns River, FL.
Small ports, rivers, etc., Norfolk Dist.	ND	06560-06589 06593-06621 06810-10254 10276, 10300, 10424, 10840	Includes minor coastal areas between "Chincoteague Bay, MD & VA;" & "Waterway on Coast of Virginia;" & between "Crones Creek, VA" & "Antipoison Creek, VA;" & between "Piankatank River, VA" & "Davis Creek, VA;" Back Creek, VA, Old Point Comfort-Back Creek Area, VA; Lynnhaven Roads, VA, & Elizabeth City, NC.

Wilmington, NC, District

*Atlantic IWW	IW	11050-11056	Includes Wilmington District section of the AIWW from Norfolk, VA, to St. Johns River, FL.
#Chowan River, NC	CF	11064-11068	Also includes Pembroke Creek, NC; Mehrrin River, NC; & Cashie River, NC.
*Roanoke River, NC	RK	11070	
#Pamlico & Tar Rivers, NC	PL	11280, 11290	Also includes Pamlico Sound.
#Neuse River, NC	NU	11392-11433	Includes Neuse River & its tributaries.
*Morehead City Harbor, NC	MC	11590	

TABLE D2 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
#Wilmington Harbor, NC	WH	11828-11835	Also includes Smiths Creek, NC; Wilmington Harbor-Southport, NC; Cape Fear River, NC above Wilmington; Northeast (Cape Fear) River, NC; Price's Creek, NC.
Small ports, rivers, etc., Wilmington Dist	WZ	11000-11001 11059-11063 11072-11235 11295-11390 11505-11585 11595, 11840-11909	Includes Atlantic Ocean off Wilmington Dist. Coast; offshore-Atlantic Ocean opposite Masonboro Inlet, NC; minor coastal areas between "Kitty Hawk, NC" & "Newbegun Creek, NC;" & between "Mackay Creek, NC" & "Swan Quarter Bay to Deep Bay, NC." & between "Bath Creek, NC" & "Smiths Creek, NC;" & between "Cedar Island, NC" & "Beaufort Harbor, NC;" Atlantic Beach Channels; & between "Black River, NC" & "Shallotte River, NC"
<u>Charleston, SC, District</u>			
*Atlantic IWW	IW	12001, 12160, 12260	Includes Charleston District section of the AIWW from Norfolk, VA, to St. Johns River, FL.
Winyah Bay, SC	WB	12110, 12114, 12116-12118, 12121	Also includes as listed in the 1974 WCSC Manual (Part 1) Georgetown Harbor; Great Pee Dee River, SC; Black River, SC; Sampit River, SC; Mingo Creek, SC; Waccamaw River, SC & NC.
*Charleston Harbor, SC	CV	12209-12214	Listed as a major grouping in the WCSC Manual (Part 1).
Small ports, rivers, etc., Charleston Dist	CJ	12000, 12050, 12130-12150, 12216-12250 12263-12350	Includes Atlantic Ocean off SC coast; Murrells Inlet, SC; Santee River, SC; Congaree River, SC; McClellanville, SC; & minor coastal areas between "Wando River, SC" & "Russell Creek, SC;" & between "South Edisto River, SC;" & "Port Royal Sound, SC."

TABLE D2 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
<u>Savannah, GA, District</u>			
Savannah Harbor & River, GA	SV	13040, 13042	As separately listed in the WCSC Manual (Part 1)
*Brunswick Harbor, GA	BS	13170, 13172	Also includes Turtle River, GA
*St. Marys River, GA	MX	13220	
*Atlantic IWW	IW	13516-13677	Includes Savannah Dist. section of the AIWW from Norfolk, VA, to St. Johns River, FL.
Small ports, rivers etc., Savannah Dist	SK	13000, 13050-13144,	Includes Atlantic Ocean off Savannah coast; minor coastal areas between "Tybee River, GA," & "Ocmulgee River, GA;" & between "Fancy Bluff Creek, GA" & "White Oak Creek, GA.

Jacksonville District

*Fernandina Harbor, FL	FH	13224	
Atlantic IWW	IW	13785	Includes Jacksonville Dist section of the AIWW from Norfolk, VA, to St. Johns River, FL.
*Jacksonville Harbor FL	JV	14017, 14018	
*St. Johns River, FL Jacksonville to Lake Herney	JS	14020	
*Rice Creek, FL	RI	14021	
*Canaveral Harbor, FL	CV	14149-14151	



TABLE D2 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
*Palm Beach Harbor, FL	PF	14266-14269	As listed in the WCSC Port & Dock Manual (Part 2) & including "Atlantic Ocean at Palm Beach," & "Palm Beach, FL Channel & Basin."
*Port Everglades Harbor, FL	PG	14310-14313	As listed in WCSC Manual (Part 2) & including "Dania Cutoff Canal" & "New River, FL."
*Miami Harbor, FL	MH	14324-14327	As listed in WCSC Manual (Part 2) & including Miami River & Miami Canal.
IWW-Jacksonville Dist	MW	14350, 14769, 14770, 16158-16507	Includes IWW from Jacksonville to Miami; from Miami to Key West; & from Caloosahatchee River to Anclote River, FL.
*Okeechobee Waterway, FL	OE	14705	
*Charlotte Harbor, FL	CE	14724, 14725	
*St. Petersburg Harbor, FL	SU	14785	
*Tampa Harbor, FL	TG	14789, 14790	
Small ports, rivers, etc. Jacksonville Dist	JZ	14049-14140, 14152-14238, 14308, 14309, 14314, 14328, 14349, 14466-14704, 14756, 14780, 14787, 14787, 14788, 14791-14934	Includes minor coastal areas between "Atlantic Ocean at St. Augustine Harbor, FL" & "Courtenay Channel, FL" & between "Banana River via Canaveral Canal" & "St. Lucie Inlet, FL;" Atlantic Ocean at Hillsboro Inlet, Broward County & Hillsboro Inlet; North New River Canal, FL; Bakers Haulover Inlet, FL; Open Water via ICW Miami Lo Key West; minor coastal areas between "Uncoded Waters at Key West Harbor, FL" & "Open Water via Okeechobee Waterway, FL;" Caseys Pass, Venice Inlet, FL; Manatee River, FL; Weedon Island, FL; Old Tampa Bay, FL; minor coastal areas between "Little Manatee River, FL" & "Steinhatchee River, FL."

TABLE D3  
AREA CODES FOR THE PACIFIC COAST

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
<u>Los Angeles District</u>			
*San Diego Harbor	SD	80020	
#Long Beach Harbor	LB	80200, 80201	
*Los Angeles Harbor	LA	80210	
*El Segundo, CA	ES	80265	
#Ventura Harbor, CA	VH	80367, 80370	
*Carpinteria, CA	CK	80399	
San Luis Obispo Harbor, CA	SS	80600	
#Estero Bay, CA	EB	80633, 80635, 80641	
Minor Ports, Rivers, etc., Los Angeles Dist	LZ	80000, 80042-80199, 80255, 80280, 80355, 80361, 80410-80468, 80631, 80700-80870	Includes Cortes Bank or Tanner Bank; minor coastal areas between "Mission Bay Harbor, CA;" & "Alamitos Bay, CA," Redondo Beach Harbor, CA; Santa Monica, CA; Port Hueneme, CA; Mandalay Beach, CA; minor coastal areas between "Santa Barbara Harbor, CA," & "Gaviota Harbor, CA;" Morro Bay Harbor, CA; minor coastal areas between the "International Boundary line to San Mateo Point, CA" & "San Miguel Island, CA."

\* An area composed of the identical points (docks, wharfs, piers, landings, bays, etc), to the degree of accuracy possible, as the selected waterway or port bearing the same name in the appropriate WCSC publication on Waterborne Commerce of the U.S. (1972)

# An area bearing the same name as that of a selected waterway or port in the appropriate WCSC publication but which does not necessarily contain the same identical points.

NOTE: Areas not preceded by either "\*" or "#" are composed of the waterways, harbors, etc. as described in the Explanation column.

TABLE D3 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
<u>Sacramento District</u>			
#Suisan Bay Channel, CA	SY	81050, 81060, 81100	As listed in the WCSC Port and Dock Manual (Part 4) including Suisan Slough Channel, CA, & Collinsville, CA.
Sacramento River, CA	SO	81106-81345, 81600 81700-81729	Includes all ports on the Sacramento River & its tributaries.
San Joaquin River, CA, & Tributaries	SJ	81401-81580	Includes all ports on the San Joaquin River & its tributaries.
Minor Ports, Rivers, etc., Sacramento Dist	SZ	81620	Includes Lake Tahoe, CA, only.
<u>San Francisco District</u>			
Monterey Bay, CA	MY	82080, 82090, 82110	Includes Monterey Harbor, Moss Landing Harbor, & Santa Cruz Harbor.
#San Francisco Harbor	SF	82202, 82220	Includes the South San Francisco Harbor, CA, as well as the main San Francisco Harbor.
*Redwood City Harbor, CA	RC	82238	
*Oakland Harbor, CA	OK	82280	
*Richmond Harbor, CA	RH	82300	
*San Pablo Bay & Mare Island Strait, CA	SP	82310	
*Carquinez Strait, CA	CZ	82323	
*San Francisco Bay Area Other Ports	SX	82400	

TABLE D3 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
*Humboldt Harbor & Bay, CA	HT	82690	
*Crescent City Harbor, CA	CY	82775	
Minor Ports, River, etc., San Francisco, Dist.	SQ	82000, 82170, 82248, 82250, 82252, 82290, 82325, 82340, 82355, 82360, 82401, 82442, 82558, 82756, 82800-82888	Includes Open Sea; Halfmoon Bay, CA; Alviso Slough, CA; Coyote Hill Slough, CA, Newark Slough, CA; Berkeley Harbor; Napa River, CA; Petaluma River, CA; San Rafael Creek, CA; Richardson Bay, CA; Point Bonita; Bodega Bay, CA; Noyo River, CA; Klamath River - 30 mi Station; & minor coastal areas between "San Francisco Dist, CA, Other Ports" & "Orick."



TABLE D3 (cont)

Portland District

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
#Youngs Bay & River	YY	90012, 90013	As listed in WCSC Manual (Part 4) & part of the port of Astoria, OR, adjacent to Youngs Bay.
Columbia River, Oregon & Washington	CM	90002-90011; 90014-90020, 90022-90086; 90088-90101, 90103-90215, 90994	Includes all ports on & adjacent to the Columbia River mainstream & its minor tributaries.
*Deep River, WA	DE	90021	
*Multnomah Channel, OR	MT	90087	
*Oregon Slough, & Hayden Island, OR	OS	90102	
*Willamette & Yamhill Rivers, OR	WY	90500-90631	The Willamette & Yamhill Rivers are listed under Willamette River, OR, in the WCSC Manual (Part 4).
*Coquille River, OR	CQ	90902, 90903	As listed in WCSC Manual (Part 4), & includes Coquille River Entrance, OR.
*Coos Bay, OR	CB	90910, 90911	
*Coos & Millicoma Rivers, OR	CX	90912, 90914	These rivers are listed separately in WCSC Manual (Part 4).
*Umpqua River, OR	UR	90919, 90920	As listed in WCSC Manual (Part 4) & includes Entrance, OR
*Smith River, OR	SI	90922	
*Suislaw River, OR	SW	90929	
*Yaquina River, OR	YR	90946	

TABLE D3 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
<u>Portland District (cont)</u>			
*Yaquina Bay & Harbor, OR	YB	90947	
*Tillamook Bay & Bar, OR	TI	90973	
Minor Ports, Rivers, etc. - Portland Dist	PZ	90000, 90001, 90632-90890, 90935, 90951, 90955, 90978	Includes Open Sea; Overseas ports; Minor coastal areas between "Corvallis, Washington," & "Port Orford, OR," Alsea River, OR; Depoe Bay, OR; Siletz River, OR; & Nehalem Bay & River, OR.
<u>Seattle District</u>			
*Willapa Harbor & Willapa River, WA	WA	91008-91011	
*Grays Harbor & Chehalis River, WA	GR	91016-91020, 91022	
*Hoquiam River, WA	HQ	91023	
*Neah Bay, WA	NE	91071	
*Port Angeles Harbor, WA	AN	91097	
*Port Townsend Harbor, WA	TW	91113, 91114	
*Port Gamble Harbor, WA	GA	91137	
*Hammersley Inlet, Shelton, WA	HY	91174	
*Olympia Harbor, WA	OY	91178	

TABLE D3 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
<u>Seattle District (cont)</u>			
#Tacoma Harbor, WA	TA	91181-91190	Includes all points listed in the WCSC Manual under Tacoma Harbor, WA.
#Seattle Harbor, WA	SE	91208-91221	Includes Lake Washington, Ship Channel WA, as well as all Seattle Harbor segments.
#Everett Harbor & Snohomish	EV	91247-91250	Includes all portions of the harbor & river as listed in the WCSC Manual (Part 4).
#Anacortes Harbor, WA	AH	91282-91284	Includes all portions of the Anacortes Harbor as listed in the WCSC Manual (Part 4).
*Bellingham Bay & Harbor, WA	BV	91287-91290	
Columbia River, Wenatchee & Kettle Falls, WA	CM	91852	
Minor Ports, Rivers, etc. - Seattle Dist	SE	91000, 91003, 91021, 91030, 91050, 91269, 91273, 91279, 91297-91716, 91869-91995	Includes Open Sea; Naselle River, WA; Wishkah River, Grays Harbor, WA; Seattle Dist, Other Coastal Ports; Quillayute River, WA; Stillaguamish River, WA; Skagit River or Mt. Vernon, WA; Swinomish Slough or LaCommer, WA; & minor waterways & coastal areas between "Blaine Harbor, WA," & Wenatchee, WA," & "Keller Landing, WA" & "International Boundary U.S. & Canada."

TABLE D3 (cont)

Area Descriptive Title	Area Code	WCSC Port Codes Included	Explanation
<u>Walla Walla District</u>			
Columbia River, OR & WA	CM	92216-92382	Includes all ports on & adjacent to the Columbia River mainstream & its minor tributaries.
#Snake River, OR, WA, & Idaho	SN	92641-92872	Includes all ports on & adjacent to the Snake River mainstream & its tributaries



APPENDIX E: WATERWAY POINT DIRECTORY FOR THE  
GREAT LAKES AREA

(Bound separately; Data available on loan from  
WES library)

APPENDIX F: WATERWAY POINT DIRECTORY FOR THE  
ATLANTIC COAST AREA

(Bound separately; Data available on loan  
from WES library)

APPENDIX G: WATERWAY POINT DIRECTORY FOR THE  
PACIFIC COAST AREA

(Note: To be bound separately)

In accordance with ER 70-2-3, paragraph 6c(1)(b), dated 15 February 1973, a facsimile catalog card in Library of Congress format is reproduced below.

Daggett, Larry L

Waterway Point Directory for the Great Lakes, Atlantic, and Pacific areas, by Larry L. Daggett [and] Robert W. McCarley. Vicksburg, U. S. Army Engineer Waterways Experiment Station, 1976.

1 v. (various pagings) illus. 27 cm. (U. S. Waterways Experiment Station. Miscellaneous paper H-76-2)

Prepared for Office, Chief of Engineers, U. S. Army, Washington, D. C.

1. Atlantic Coast. 2. Business Economic Areas. 3. Dock codes. 4. Great Lakes. 5. Navigation directories. 6. Pacific Coast. 7. Port codes. 8. Standard Metropolitan Statistical Areas. 9. Water Resource Areas. 10. Waterborne commerce. 11. Waterway Point Directory. 12. Waterways (transportation). I. McCarley, Robert Winton, joint author. II. U. S. Army. Corps of Engineers. (Series: U. S. Waterways Experiment Station, Vicksburg, Miss. Miscellaneous paper H-76-2)

TA7.W34m no.H-76-2